

INTERNATIONAL SEARCH REPORT

Inte I Application No
PCT/US2005/004459

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H01L23/49

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H01L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2004/003535 A (NANOSYS INC; PONTIS, GEORGE; STONAS, WALTER; CHOW, CALVIN; PARCE, WALL) 8 January 2004 (2004-01-08) the whole document -----	1-26
A	US 2003/186522 A1 (DUAN XIANGFENG ET AL) 2 October 2003 (2003-10-02) paragraph '0082! -----	

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the International filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

18 August 2005

Date of mailing of the international search report

29/08/2005

Name and mailing address of the ISA

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Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.: 27-125 because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210

3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
 No protest accompanied the payment of additional search fees.

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FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.2

Claims Nos.: 27-125

Contrary to Article 6 PCT, the claims as a whole are not concise because of 6 independent device claims and 5 independent method claims. Further, due to the various features claimed in the various independent claims it is obscure which features are essential to the invention. For example, the first independent method claim, claim 1, contains the feature that the semiconductor wire comprises at least one portion having a smallest dimension of less than about 500 nm, a feature not contained in the first independent device claim, claim 27, which claim however contains the feature that the wire is a single crystal, a feature not contained in claim 1. Further, the term "wire" used both in claim 1 and in claim 27 is so broad that it renders D1: WO 2004/003535 A1 - concerning a nanowire formed by etching - novelty destroying to claim 1. Thus, for example, claims 1 and 27 are no longer linked by a single general inventive concept in the sense of Rule 13.1 PCT, and further search fees could be asked for. But asking for further search fees for claims which simply lack unity because they do not show all features essential to the invention seems not appropriate. However, as pointed out above, it is obscure which features are essential to the invention. Since a meaningful search involving a meaningful objection as to lack of unity was not possible, the search is incomplete.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

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Information on patent family members

Int'l Application No

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Patent document cited in search report		Publication date		Patent family member(s)		Publication date
WO 2004003535	A	08-01-2004	AU	2003258969 A1		19-01-2004
			WO	2004003535 A1		08-01-2004
			US	2004136866 A1		15-07-2004
US 2003186522	A1	02-10-2003	AU	2003222134 A1		20-10-2003
			AU	2003260527 A1		20-10-2003
			EP	1522106 A2		13-04-2005
			EP	1508161 A2		23-02-2005
			WO	03085700 A2		16-10-2003
			WO	03085701 A2		16-10-2003
			US	2004005723 A1		08-01-2004